Claims

1. An electric heating element with radiant tube comprising a radiation pipe (1) and an electric heating element (2, 3) contained in said pipe, wherein the heating element has legs that run to and fro in the pipe, and wherein the heating element is connected at one end of the pipe close to a furnace wall with electric power outlets through which electric current is fed to the element, wherein the element is supported in the pipe by supportive ceramic discs (9) that are provided with through-penetrating holes through which respective legs extend, and wherein two heating elements (2, 3)are disposed sequentially in said radiation pipe along its long axis, c h a r a c t e r i z e d in that a central rod (5) extends through the centre of the radiation pipe (1) from its one end (8) to its other end (11) and also through the centre of each supportive disc (9); in that the central rod forms an electric power outlet for at least one of said heating elements (3); in that a connection region (12) for said two heating elements in the radiation pipe is situated between the elements in the longitudinal direction of the pipe (1), wherein respective elements are connected to their respective power outlets (4 – 6) in said connection region; in that the heating element includes stop means (13 – 17) which function to generally retain ceramic discs (18 – 23) present in the connection region in a direction along the long axis of the pipe; and in that supportive ceramic discs (9) for supporting respective elements are placed at a distance from said connection region (12), wherein at least some of said ceramic discs (14, 15) are able to move freely along the pipe (1) to an extent allowed by element-related stop means (27) as respective elements expand or contract in response to a change in the temperature of said elements.

2. An electric heating element according to Claim 1, c h a r a c t e r i s e d in that the power outlet (4) or the power outlets (4, 6) that runs/run to respective elements (2, 3) from said one end of the pipe to form an electric circuit with the central rod (5) extends/extend through the ceramic supportive discs (9).

3. An electric heating element according to Claim 1 or 2, c h a r a c t e r i s e d in that ceramic sleeves (13 – 17) are disposed on the outside of and along the central rod (5). wherein said sleeves are together adapted to space apart the supportive ceramic discs (9) in addition to spacing apart the ceramic discs (14, 15) situated at respective ends of the legs of said elements (2, 3) at the ends (8, 11) of the pipe.

4.. An electric heating element according to Claim 1 2 or 3, c h a r a c t e r i s e d in that the ceramic discs (15, 15) located at the ends of the legs of respective elements run along the outside of said sleeves (13).

5.. An electric heating element according to Claim 1, 2, 3 or 4, c h a r a c t e r i s e d in that the leg is short-circuited at at least certain ends (26) thereof with the aid of an electric conductor (27) placed close to said supportive ceramic disc (9) and on the opposite side of the ceramic disc relative to the leg end (26).

6. An electric heating element according to Claim 1, 2, 3, 4 or 5, c h a r a c t e r i s e d in that a ceramic disc (28) is fastened to the central rod (5) at its free non-current-receiving end.

7.. An electric heating element according to Claim 1, 2, 3, 4, 5 or 6 c h a r a c t e r i s e d in that the radiation pipe (1) is a closed pipe.

8.. An electric heating element according to Claim 1, 2, 3, 4, 5, 6, or 7 c h a r a c t e r i s e d in that two radiation pipes (1) are placed axially one after the other in a furnace space, such as to cover essentially the width of the furnace.

9.. An electric heating element according to any one of the preceding Claims, c h a r a c t e r i s e d in that the element (2) located furthest from the furnace wall (7) with a power outlet is powered through said central rod and a separate lead-in (35); and in that the other element is powered with the aid of two separate lead-ins (36, 37).

10. An electric heating element according to any one of Claims 1 – 8, c h a r a c t e r i s e d in that both elements (2, 3) are powered through said central rod (5) and a separate lead-in for each element.